

WHAT IS CLAIMED IS

1. A processing liquid tank for storing a processing liquid comprising:
  - an inner cylinder disposed in the processing tank;
  - the processing liquid being stored outside of the inner cylinder,
  - a pipe for flowing a heat medium disposed in the processing liquid.
2. The processing liquid tank according to claim 1, comprising:
  - a cylindrical straightening vane,
  - a flow passage of the processing liquid where the processing liquid descends along the inside of the cylindrical straightening vane, passes between a lower part of the straightening vane and the bottom surface of the processing liquid tank and then ascends along the outside of the straightening vane, or a flow passage of the processing liquid where the processing liquid descends along the outside of the straightening vane, passes between a lower part of the straightening vane and the bottom surface of the processing liquid tank and ascends along the inside of the straightening vane being formed, and
  - the pipe being arranged in the flow passage.
3. The processing liquid tank according to claim 2, wherein the flow of the heat medium passing through the pipe and the flow of the processing liquid are opposite to each other.
4. The processing liquid tank according to claim 2, which comprises
  - a baffleplate for partitioning the interior of the processing tank in an upper part and a lower part, the baffle plate being positioned upper of the pipe and the straightening vane; and
  - an outlet pipe for drawing the processing liquid below the baffleplate out of a region inner or outer of the straightening vane without mixing the processing liquid below the baffle plate with the processing liquid upper of the baffle plate.

5. The processing liquid tank according to claim 4, wherein the baffleplate is fixed to the inner cylinder or to the inside wall of the processing liquid tank, and the straightening vane is fixed to the baffleplate.
6. The processing liquid tank according to claim 4, wherein the baffleplate is tilted, and the outlet pipe is disposed in the higher part of the baffleplate.
7. The processing liquid tank according to claim 2, wherein the pipe being formed helically in the region outer of the straightening vane.
8. The processing liquid tank according to claim 2, wherein the pipe is formed helically in the region inner of the straightening vane.
9. The processing liquid tank according to claim 2, wherein the pipe is formed helically in the region outer of the straightening vane and in the region inner of the straightening vane.
10. The processing liquid tank according to claim 1, comprising a plurality of the pipes, the pipes being arranged substantially in parallel with each other.
11. The processing liquid tank according to claim 7, comprising:  
a plurality of the pipes,  
the pipes being juxtaposed with each other with their transverse sections arranged in a vertical line and formed helically in the region outer of the straightening vane.
12. The processing liquid tank according to claim 8, comprising:  
a plurality of the pipes,  
the pipes being juxtaposed with each other with their transverse sections arranged in a horizontal line and formed helically in the region inner of the straightening vane.

13. The processing liquid tank according to claim 9, comprising:  
a plurality of the pipes,

the pipes being juxtaposed with each other with their transverse sections arranged in a vertical line and formed helically in the region outer of the straightening vane and being juxtaposed with each other with their transverse sections arranged in a horizontal line and formed helically in the region inner of the straightening vane.

14. The processing liquid tank according to claim 10, wherein  
at least one of said plural pipes can be changed over to pass a cooling heat medium and to pass the heating heat medium.

15. The processing liquid tank according to claim 1, wherein  
the liquid contact surfaces of the processing liquid tank and the pipe are respectively made of a chemical liquid resistant resin.

16. The processing liquid tank according to claim 1, wherein  
the inner cylinder has the bottom closed capably of storing a liquid inside.

17. The processing liquid tank according to claim 16, wherein  
the liquid in the inner cylinder has a temperature adjusted by the heat medium or the processing liquid.

18. A processing system comprising:  
the processing liquid tank according to claim 1;  
a processing unit for processing objects-to-be-processed; and  
a processing liquid supply line for supplying a processing liquid from the processing liquid tank to the processing unit.